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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,427	01/22/2004	Shigeo Hayashi	50395-248	1418

7590 11/01/2006  
MCDERMOTT, WILL & EMERY  
600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER

NGUYEN, DUNG T

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/761,427	<b>Applicant(s)</b> HAYASHI, SHIGEO	
	<b>Examiner</b> Dung (Michael) T. Nguyen	<b>Art Unit</b> 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 5-7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 8-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

After carefully reviewed, the indicated allowed claims 5-12 are withdrawn based on the Wong prior art and the finality rejection is also withdrawn. Claim 13 is still allowed.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5-7 and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Wong (4730112).

With respect to claims 5 and 11, Fig.14 shows a semiconductor laser module, comprising:

(a) an optical assembly including

a laser diode 16 for emitting light within a predetermined wavelength range at a temperature by providing a driving signal thereto,

a temperature sensor 92 for sensing the temperature of said laser diode,

a heater 96 for simulating a self-heating of said laser diode by providing a supply current (col.11, l.33-67), and

a thermoelectric cooler 98 for controlling said temperature of said laser diode, said thermoelectric cooler mounting said semiconductor laser diode, said temperature sensor and said heater thereon; and

(b) a controller including

a window comparator 119 for comparing said temperature of said laser diode sensed by said temperature sensor and a predetermined range (from 124), said comparator outputting a

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switching signal when said temperature of said laser diode falls within said predetermined range (col.11, l.33-67 and Fig.12), and

a first switch 123 connected to said heater, said switch having a normally close configuration and turning off by receiving said switching signal from said window comparator, thereby shutting off said supply current to said heater.

With respect to claim 6, Fig.14 shows aid driving signal includes a bias current  $I_{dc}$  and a modulation current  $I_s$ , and said semiconductor laser module further comprises a second switch 117 and a third switch 15, said second switch turns on and supplies said bias current to said laser diode by receiving said switching signal, and said third switch turns on and supplies said modulation current to said laser diode by receiving said switching signal.

With respect to claim 7, col.11, l.60-63 discloses a memory means (pre-programmed) for preserving said temperature range (also see col.9, l.10-18 for the relationship between the resistor value and the temp. value) in digital form (since Wong discloses the pre-programmed step, that means that it must be in digital form).

With respect to claim 10, Fig.14 shows a laser diode driver (the intersection + of  $I_{dc}$  and  $I_s$ ) for driving said laser diode, wherein said laser diode driver receives said bias current and said modulation current and outputs said driving signal to said laser diode.

With respect to claim 12, Fig. 14 shows an optical assembly, comprising:

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a laser diode 16 for emitting light within a predetermined wavelength range at a temperature by providing a driving signal thereto;

a temperature sensor 92 for sensing said temperature of said laser diode;

a heater 96 for simulating a self-heating of said laser diode by providing a supply current before said driving signal is provided to said laser diode (col. 11, 1.33-67);

a thermoelectric cooler 98 for controlling said temperature of said laser diode, said thermoelectric cooler mounting said laser diode, said temperature sensor and said heater thereon; and

first to third terminals, said first (at between diode laser 16 and heatsink 20) and second (at top of diode laser 16) terminals arranging said laser diode therebetween and said first and third (at input of heater 96) terminals arranging said heater therebetween, wherein said driving signal is provided to said second terminal and said supply current is provided from said third terminal.

***Allowable Subject Matter***

Claims 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Wong fails to disclose the limitations as recited in the claims.

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### Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.



Michael Dung Nguyen

6/4/06